

WHAT IS CLAIMED IS:

1. A process of preparing a continuous filament composed of nanofibers, wherein a polymer spinning liquid is electrospun to a collector 7 through nozzles 5 to obtain a nanofiber web 17a of ribbon form,
5 then the nanofiber web 17a is passed through an air twister 18 and twisted to obtain a nanofiber filament 17b of a continuous filament form, and then the nanofiber filament 17b is drawn.
- 10 2. The process of claim 1, wherein the nanofiber web 17a of ribbon form is obtained by electrospinning in a manner that the width of the nanofiber web 17a is the same as the overall width of the collector 7 and then cutting the nanofiber web by a web cutter 16.
- 15 3. The process of claim 2, wherein the web cutter 16 consists of a rotary blade 16a and a motor 16b rotating the rotary blade.
4. The process of claim 1, wherein the nanofiber web 17a of ribbon form is obtained by electrospinning in narrow sections in a manner the
20 width of the nanofiber web 17a is the same as the width of one nozzle block 4.
5. The process of claim 4, wherein a collector 7 with barriers 7b

installed thereto at the same distance as the width of one nozzle block 4 is used in electrospinning.

6. The process of claim 1, wherein the air twister 18 is provided
5 with a passage of the nanofiber web 17a and an air outlet formed at the center along the longitudinal direction and an air inlet formed in a direction perpendicular or inclined to the air outlet.

7. The process of claim 1, wherein the electrospinning type is
10 upward electrospinning type, downward electrospinning type or horizontal electrospinning type.

8. The process of claim 1, wherein a nanofiber web separating
film or a nonwoven fabric 24 is continuously fed onto the surface of the
15 collector 7 where nanofibers are electrostatically spun.

9. The process of claim 1, wherein a nanofiber web separating
solution 27 is continuously or discontinuously coated or sprayed onto the
collector 7 where nanofibers are electrostatically spun.

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10. The process of claim 9, wherein the nanofiber web separating
solution 27 is water, a cationic surfactant, an anionic surfactant, an
amphoteric (cationic-anionic) surfactant, or a neutral surfactant.

11. The process of claim 9, wherein the web separating solution 27 is methanol, ethanol, toluene or methylene chloride.

5 12. The process of claim 1, wherein the nanofiber filament 17b is drawn between two rollers by using a gap in rotation linear velocity between the rollers.

10 13. The process of claim 1, wherein more than two kinds of nanofiber webs of ribbon form obtained by electrostatically spinning more than two kinds of spinning liquids are passed through one air twister 18.

15 14. The process of claim 1, wherein the drawn nanofiber filament 17b is heat treated.